

# Stepping Motors

## M49SP-1

### OUTLINE

"M49SP-1" has acquired the highest output torque among the outer diameter 49mm model series—holding torque : 181.3mN·m, pull-out torque : 62.7mN·m/150pps, and pull-in torque : 60.8mN·m/150pps (12V DC).

With superior running noiselessness and other features, this model motor is the most suited to future, compact electronic equipment.



### FEATURES

1. High output torque.
2. Superior running quietness and stability.
3. Step angle : 7.5°.
4. Excellent responsiveness acquired.

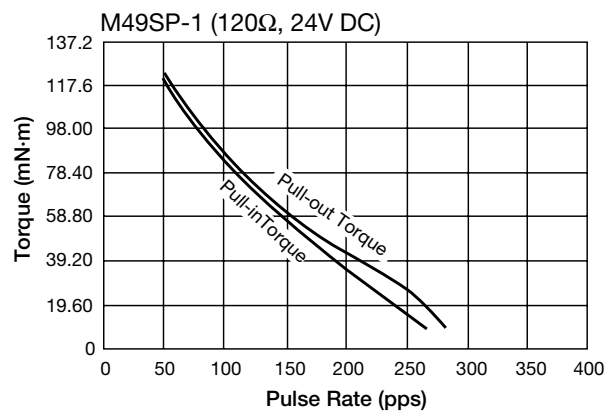
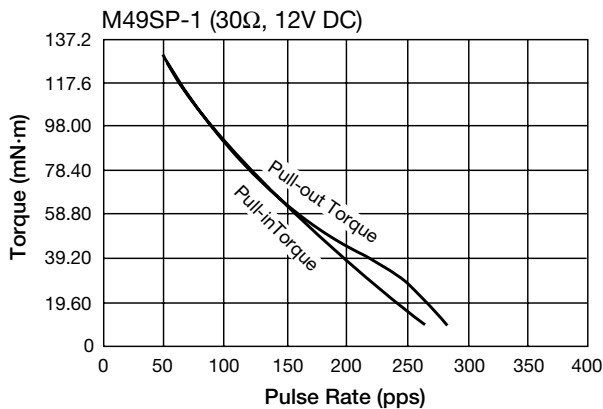
### USES

Printers, multifunction machines, copy machines, FAX, and such.

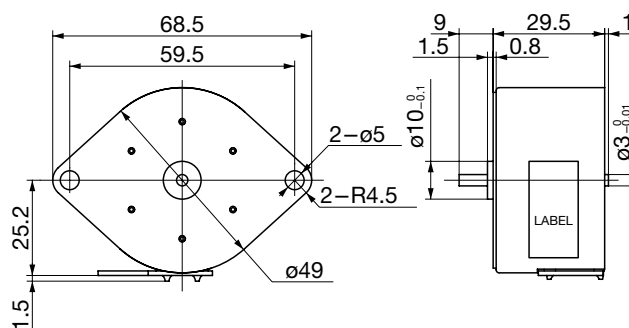
## SPECIFICATIONS

Items	M49SP-1	
Rated Voltage	DC 12V	DC 24V
Working Voltage	DC 10.8~13.2V	DC 21.6~26.4V
Rated Current/Phase	431mA	216mA
No. of Phase	4 Phase	4 Phase
Coil DC Resistance	30Ω/phase±7%	120Ω/phase±7%
Step Angle	7.5°/step	7.5°/step
Excitation Method	2-2 Phase excitation (Unipolar driving)	
Insulation Class	Class E insulation	Class E insulation
Holding Torque	181.3mN·m	176.4mN·m
Pull-out Torque	62.7mN·m/150pps	60.8mN·m/150pps
Pull-in Torque	60.8mN·m/150pps	58.8mN·m/150pps
Max. Pull-out Pulse Rate	290pps	290pps
Max. Pull-in Pulse Rate	280pps	280pps

## CHARACTERISTICS



## DIMENSIONS



Unit : mm, General tolerance : ±0.5